Claims:

What is claimed is:

1. A method of handling a memory exhaustion condition in a data processing system having first and second regions of physical memory, said method comprising:

    detecting a memory exhaustion condition while said second region is mirroring at least part of said first region;

    in response to said memory exhaustion condition, at least partially deactivating memory mirroring between said first and second regions; and

    augmenting said first region with at least part of said second region, such that said memory exhaustion condition is eliminated.

2. The method of Claim 1, said data processing system compressing real memory into said first region of physical memory, wherein:

    said step of detecting a memory exhaustion condition comprises determining that said first region lacks sufficient available capacity to accommodate current requirements for real memory; and

    said step of augmenting said first region comprises compressing at least part of said required real memory into said at least part of said second region.

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3.   The method of Claim 2, further comprising:

in response to said memory exhaustion condition, recording data relating to said memory exhaustion condition; and

subsequently utilizing said data to set a compression ratio for memory compression.

4.   The method of Claim 1, said data processing system having a mirror mode controller that directs a memory access to said first region or said second region in accordance with one or more mirror mode bits, wherein:

said step of augmenting said first region comprises modifying at least one of said one or more mirror mode bits.

5.   The method of Claim 1, further comprising:

after memory mirroring has been at least partially deactivated, determining that memory needs have diminished; and

in response, at least partially reactivating mirroring.

6.   A data processing system comprising:

first and second regions of physical memory;

detection logic that detects a memory exhaustion condition while said second region is mirroring at least part of said first region; and

configuration logic that, responsive to said memory exhaustion condition, at least partially deactivates memory mirroring between said first and second regions and augments said first region with at least part of said second region, such that said memory exhaustion condition is eliminated.

7.   The data processing system of Claim 6, wherein:

said data processing system compresses real memory into said first region of physical memory;

said detection logic comprises a memory controller that detects said memory exhaustion condition by determining that said first region lacks sufficient available capacity to accommodate current requirements for real memory; and

said configuration logic comprises a memory manager that augments said first region by configuring said memory controller to compress at least part of said real memory into said at least part of said second region.

8.   The data processing system of Claim 7, wherein:

in response to said memory exhaustion condition, said memory manager records data relating to said memory exhaustion condition; and

said memory manager subsequently utilizes said data to set a compression ratio for memory compression.

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9.   The data processing system of Claim 6, wherein:

said data processing system further comprises a mirror mode controller that directs a memory access to said first region or said second region in accordance with one or more mirror mode bits; and

said configuration logic augments said first region by modifying at least one of said one or more mirror mode bits.

10.   The data processing system of Claim 6, wherein:

after memory mirroring has been at least partially deactivated, said configuration logic determines that memory needs have diminished; and

in response, said configuration logic at least partially reactivates mirroring.

11. A program product that handles a memory exhaustion condition in a data processing system having a memory controller and first and second regions of physical memory, said program product comprising:

a computer usable medium encoding a memory manager;

deactivation instructions within said memory manager that at least partially deactivate memory mirroring between said first and second regions in response to a memory exhaustion condition arising while said second region is mirroring at least part of said first region; and

augmentation instructions within said memory manager that cause said memory controller to augment said first region with at least part of said second region, such that said memory exhaustion condition is eliminated.

12. The program product of Claim 11, said data processing system compressing real memory into said first region of physical memory, and said memory controller detecting said memory exhaustion condition by determining that said first region lacks sufficient available capacity to accommodate current requirements for real memory, wherein:

said memory manager augments said first region by configuring said memory controller to compress at least part of said real memory into said at least part of said second region.

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13. The program product of Claim 12, wherein:

in response to said memory exhaustion condition, said memory manager records data relating to said memory exhaustion condition; and

said memory manager subsequently utilizes said data to set a compression ratio for memory compression.

14. The program product of Claim 11, wherein:

said data processing system further comprises a mirror mode controller that directs a memory access to said first region or said second region in accordance with one or more mirror mode bits; and

said memory manager augments said first region by modifying at least one of said one or more mirror mode bits.

15. The program product of Claim 11, wherein:

after memory mirroring has been at least partially deactivated, said memory manager determines that memory needs have diminished; and

in response, said memory manager at least partially reactivates mirroring.

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16.   A memory management system that handles a memory
exhaustion condition in a data processing system having
first and second regions of physical memory, said memory
management system comprising:

    detection logic that detects a memory exhaustion
condition while said second region is mirroring at least
part of said first region; and

    configuration logic that, responsive to said
memory exhaustion condition, at least partially deactivates
memory mirroring between said first and second regions and
augments said first region with at least part of said
second region, such that said memory exhaustion condition
is eliminated.

17.   The memory management system of Claim 16, said data
processing system compressing real memory into said first
region of physical memory, wherein:

    said detection logic comprises a memory
controller that detects said memory exhaustion condition by
determining that said first region lacks sufficient
available capacity to accommodate current requirements for
real memory; and

    said configuration logic comprises a memory
manager that augments said first region by configuring said
memory controller to compress at least part of said real
memory into said at least part of said second region.

18. The memory management system of Claim 17, wherein:

in response to said memory exhaustion condition, said memory manager records data relating to said memory exhaustion condition; and

said memory manager subsequently utilizes said data to set a compression ratio for memory compression.

19. The memory management system of Claim 16, wherein:

said memory management system further comprises a mirror mode controller that directs a memory access to said first region or said second region in accordance with one or more mirror mode bits; and

said configuration logic augments said first region by modifying at least one of said one or more mirror mode bits.

20. The memory management system of Claim 16, wherein:

after memory mirroring has been at least partially deactivated, said configuration logic determines that memory needs have diminished; and

in response, said configuration logic at least partially reactivates mirroring.

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21. A data processing system comprising:

first and second regions of physical memory;

detection means for detecting a memory exhaustion condition while said second region is mirroring at least part of said first region; and

configuration means, responsive to said memory exhaustion condition, for at least partially deactivating memory mirroring between said first and second regions and augmenting said first region with at least part of said second region, such that said memory exhaustion condition is eliminated.

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